WHAT IS CLAIMED IS:

1. A method for synchronizing the transmission of real time synchronous data packets over **asynchronous** optical networks between at least two user terminal nodes, using a receiver and transmitter module implemented within intermediating communication devices that are connected between the TDM equipment and the asynchronous optical network, said method comprising the steps of:

A. Encapsulating data packets to include a sequence number in the data packet payload at the transmitter terminal node;

B. Providing the (TDM switch of) transmitter terminal node with **Stratum 3** , Stratum 3E . SMC or SEC classified clock pulse;

C. Preparing encapsulated data packets for transmission by the transmitter device according to the stratum 3 (3E) clock pulse;

D. Transmitting prepared data packets through an asynchronous network;

E. Receiving incoming data packets from an asynchronous network at the receiver terminal node;

F. Detecting the sequence number order of the received data packets at the receiver terminal node;

G. Compensating the packet rate of received data packets in the case of detecting offsets of non sequenced data packets;

H. Dividing the frequency rate of the incoming data signal;

I. Attenuating the data transmission signal amplitude for reducing jitter and wander in compliance with stratum 3 accuracy standards;

2. The method according to claim 1 wherein the jitter is reduced below the value of +-250 microseconds.

3. The method according to claim 1 wherein the compensation is achieved by inserting a null data packet in case of missing data packets and ignoring data packets in the case that their sequential number is out of order.

4. The method according to claim 1 wherein the incoming data signal division enlarges the signal wavelength (up to the minimum frequency time) between two cycles of the signal.

5. A receiver/transmitter module implemented within intermediating communication devices that connects between TDM communication equipment and the **asynchronous** optical network for the synchronizing the transmission of real time synchronous data packets over **asynchronous** optical networks between at least two user terminals nodes, said module is comprised of:

A. Data packets encapsulator for inserting a sequence number in the data packet payload;

B. Stratum 3 (or Stratum 3E or SMC or SEC) clock rate generator for providing a classified clock pulse to the (TDM switch) receiving terminal node;

C. Data transceiver unit for preparing encapsulated data packets for transmission according to the stratum 3 (3E) clock pulse standard by the transmitter node and transmitting thereof through the asynchronous network;

D. Receiver unit for receiving incoming data packets from the asynchronous network;

E. Data packet detector for identifying the sequence number of received data packets;

F. Clock frequency compensator for recovering the clock rate in the case that offsets of non sequenced data packets are detected ;

G. Frequency divider for dividing the incoming data signal;

H. Advanced DPLL unit for attenuating the jitter and wander amplitude that is combined with the incoming data transmission signal in order to provide output signals in compliance with stratum 3 (3E) standards;

6. The module according to claim 1 wherein the jitter is reduced below the value of ±250 microseconds.

7. The module according to claim 1 wherein the compensation is achieved by inserting a null data packet in the case of missing data packets and ignoring data packets in case their sequential number is out of order.

8. The module according to claim 1 wherein the incoming data signal division enlarges the signal wave length (up to the limits of the minimum frequency time) between two cycles of the signal.